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EXAMINER

SERGEANT, RABON A

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

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1. Claim 10 and 42 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Despite applicants' response, adequate support has not been found for the amended subject matter of claims 10 and 42. The examiner has not found support for the use of the specific additional polyols with the polyester polyol comprising polybutylene adipate.

2. Claims 44 and 46 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Each mole ratio, as claimed, is confusing, because it is unclear if each ratio is to be unitized. For example, it is unclear if the language, "from 0.98 to 1.03", is to be interpreted as 0.98:1.03 or 0.98:1 to 1.03:1.

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out

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the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. Claims 1, 3, 4, 6, 7, 10, 13, 19, 20, 23, 24, 27, 28, 31, 32, 35-39, and 42-46 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ehrlich et al. ('904) in view of van Der wal et al. ('445) and Mao ('572).

Ehrlich et al. disclose thermoplastic polyurethanes, wherein MDI is reacted with a blend of polyester polyol (b) and polyether polyol (i) and/or (ii), wherein the polyester polyol component and polyether polyol relative amounts meet those claimed, in that at least about 15 percent by weight of the polyester polyol is replaced by the aforementioned polyether polyol, and a chain extender component, wherein the chain extender component comprises straight chain diols, such as those having 2 to 6 carbon atoms, or bis(hydroxyethyl)ethers of hydroquinone and further wherein, in a preferred embodiment, up to 25 equivalent (molar) percent of the chain extender may be branched chain diols, diethylene glycol, or dipropylene glycol. See abstract; column 2, lines 40+; column 3, lines 6-43; columns 4-6; and column 7, lines 1-50, especially column 3, lines 38-43. Applicants' claimed polybutylene adipate polyester polyol is disclosed as being preferred at column 5, lines 21-23. Applicants' catalyst amount of claim 36 is disclosed at column 7, lines 47-50. Furthermore, patentees disclose the use of extrusion equipment and conventional processes for producing the thermoplastic polyurethane; therefore, applicants' claimed twin screw extruder and processing times (claims 37 and 39) are considered to be encompassed by patentees. Given the disclosed amounts of polyols and chain extenders,

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applicants' claimed ratio is considered to be met. The ratios of new claims 44 and 46 are met by the disclosure at column 6, lines 37-49.

5. However, the primary reference is silent regarding the use of polyoxytetramethylene polyols and the use of the thermoplastic polyurethane to produce coated fabrics and conveyor belts. With respect to the issue of the polyoxytetramethylene polyol, van Der wal et al. disclose thermoplastic polyurethanes derived from blends of polyester diols and polyether diols, wherein the respective amounts of the polyester diol and polyether diol satisfy that instantly claimed and further wherein a suitable polyether diol is disclosed as being polyoxytetramethylene diol (column 3, lines 67 and 68). While van Der wal et al. disclose such polyols as polyoxypropylene-polyoxyethylene glycol, van Der wal et al. further disclose at column 4, lines 8 and 9 that poly(tetramethylene oxide) diol (aka: polyoxytetramethylene polyol) is the most preferred polyether polyol. Therefore, the secondary reference establishes that the use of applicants' claimed diol within an analogous thermoplastic polyurethane was not only known at the time of invention, its use was preferred. Accordingly, it would have been obvious to incorporate such a polyether diol in the claimed amount into the composition of the primary reference, so as to arrive at the instant invention. With respect to the issue of the production of coated fabrics and conveyor belts, it is noted that both van Der wal et al. and Mao disclose the production of thermoplastic polyurethanes, derived from blends of polyester polyols and polyether polyols, that are considered to be analogous to those of the primary reference, and further that van Der wal et al. disclose the production of conveyor belts and Mao discloses the production of coated fabrics (abstracts). Accordingly, since these applications for analogous thermoplastic polyurethanes were known at the time of invention, the position is taken that it

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would have been obvious to utilize the thermoplastic polyurethane composition of Ehrlich et al. to produce the instantly claimed coated fabrics and conveyor belts.

6. Applicants' response of July 8, 2010 has been considered; however, it is insufficient to overcome the prior art rejection. Applicants have emphasized that the present claims require the use of PTMEG in combination with a polyester polyol and also require the use of a co-chain extender that has to be used in combination with a symmetrical chain extender. In response, the examiner has addressed each of these requirements within the body of the rejection. Applicants have further provided a 37 CFR 1.132 declaration to demonstrate unexpected results. With respect to the examples set forth within Table I and the first Table II of the declaration, it is noted that these examples have been previously considered by the examiner, since they are set forth within the specification. Despite applicants having amended the independent claims to recite polybutylene adipate, the position is maintained that the examples are not adequately commensurate in scope with the claims and that the invention has not been compared against the closest available art, namely Ehrlich et al. It has been held that the claims must be commensurate in scope with any showing of unexpected results. *In re Greenfield*, 197 USPQ 227. It has further been held that a limited showing of criticality is insufficient to support a broadly claimed range. *In re Lemin*, 161 USPQ 288. With these requirements in mind, applicants' examples of their invention are not commensurate in scope with the claims in terms of reactant species or amounts. Furthermore, it is noted that applicants' comparative examples within the specification fail to be representative of Ehrlich et al., because the exemplified comparative compositions fail to employ Ehrlich et al.'s disclosed polyol and the preferred chain extender blends. Furthermore, the examples set forth within the second Table II are deficient for

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the same reasons. Specifically, Inventive Example A is not adequately representative of the scope of the claimed invention and Comparative Example B does not utilize a formulation that is representative of the primary reference.

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication should be directed to R. Sergent at telephone number (571) 272-1079.

/Rabon Sergent/
Primary Examiner, Art Unit 1765